HazMat 38-05
Revised 9/07

Environmental and Public Protection Cabinet
Office of Housing, Buildings and Construction
Hazardous Materials Section
101 Sea Hero Road, Suite 100
Frankfort, Kentucky 40601-5405
Telephone: (502) 573-1702 Fax: (502) 573-1695

PERMIT APPLICATION FOR INTERIOR LINING & REPAIR OF UNDERGROUND STORAGE TANKS (UGST) FOR PETROLEUM PRODUCTS

For Office Use Only

Permit No.: _____ **Approved By:** _____
Amount Paid: _____ **Date Approved:** _____

Installation Site

_____
NAME OF BUSINESS/COMPANY (D/B/A)

_____
STREET ADDRESS

_____
CITY STATE ZIP CODE

( ) _____
TELEPHONE NUMBER COUNTY

_____
UST SITE I.D. NUMBER (EXISTING SITES ONLY)

Owner of Tanks

_____
OWNER/OPERATOR/COMPANY NAME

_____
STREET ADDRESS

_____
CITY STATE ZIP CODE

( ) _____
TELEPHONE NUMBER COUNTY

Interior Lining Contractor

_____
COMPANY NAME

_____
STREET ADDRESS

_____
CITY STATE ZIP CODE

( )
TELEPHONE NUMBER

Certified Individual

_____
NAME OF CONTRACTOR

( )
TELEPHONE NUMBER

_____
INDIVIDUAL'S CERTIFICATION NUMBER EXPIRATION DATE

Type of Facility

☐ Commercial ☐ Private Use ☐ Government ☐ Industrial ☐ Bulk Plant

☐ Other (Please Specify): _____

1. Tank Information -

TANK TYPE CODES

01	Sti-P3	05	Double Wall Steel, Fiberglass Clad
02	Single Wall FRP	06	Single Wall Steel, Fiberglass Clad
03	Double Wall Steel	07	Jacketed
04	Double Wall, FRP	08	Other (Please Specify): _____

NOTE: Tank numbers shall correspond with the tank numbers on the accompanying site plan.

TANK #1:

CAPACITY (GALLONS)	TANK TYPE CODE	APPROXIMATE AGE OF TANKS

PRODUCT STORED

☐ Tank to be lined ☐ Tank previously lined ☐ Reason for Lining: ☐ Upgrade ☐ Leak Repair

TANK #2:

CAPACITY (GALLONS)	TANK TYPE CODE	APPROXIMATE AGE OF TANKS

PRODUCT STORED

☐ Tank to be lined ☐ Tank previously lined ☐ Reason for Lining: ☐ Upgrade ☐ Leak Repair

TANK #3:

CAPACITY (GALLONS)	TANK TYPE CODE	APPROXIMATE AGE OF TANKS

PRODUCT STORED

☐ Tank to be lined ☐ Tank previously lined ☐ Reason for Lining: ☐ Upgrade ☐ Leak Repair

2. Tank Information *(continued)* –

TANK #4:

CAPACITY (GALLONS) | TANK TYPE CODE | APPROXIMATE AGE OF TANKS

PRODUCT STORED

☐ Tank to be lined ☐ Tank previously lined ☐ Reason for Lining: ☐ Upgrade ☐ Leak Repair

TANK #5:

CAPACITY (GALLONS) | TANK TYPE CODE | APPROXIMATE AGE OF TANKS

PRODUCT STORED

☐ Tank to be lined ☐ Tank previously lined ☐ Reason for Lining: ☐ Upgrade ☐ Leak Repair

2. Lining Material Specifications -

a) Manufacturer of lining material: _____

b) Name of lining material: _____

Type of lining material: _____

c) Lining material compatible with any stored product? ☐ Yes ☐ No

Note: If no, please explain: _____

d) Thickness of coating to be applied to each tank (indicate mils):

_____ TANK #1 | _____ TANK #2 | _____ TANK #3 | _____ TANK #4 | _____ TANK #5

e) Each coating application compatible with alcohol based and reformulated fuels. ☐ Yes ☐ No

f) Each tank to be properly prepared per API 1631 and NLPA 631 Standards. ☐ Yes ☐ No

g) Each coating application to be completed per manufacturer's specification. ☐ Yes ☐ No

3. Notification Information -

a) Estimated date of tank preparation: ☐☐ ☐☐ ☐☐☐☐

b) Estimated date of tank evaluation: ☐☐ ☐☐ ☐☐☐☐

c) Estimated date of coating application: ☐☐ ☐☐ ☐☐☐☐

d) Estimated date of completion: ☐☐ ☐☐ ☐☐☐☐

Note: Precision test mandatory upon completion and results shall be made available for inspection upon request.

e) Manufacturer's sealant specification data will be submitted to the Office of the State Fire Marshal.
☐ Yes ☐ No

Tank Preparation Procedure for Fiberglass Reinforced Piping For UGST's-

1. Tank Preparation Procedure -

a) If lining FRP tanks, the appropriate inspection, testing, and lining procedures will be accomplished only after consultation with the tank manufacturer or a qualified person. ☐ Yes ☐ No

b) Employees performing the lining or tanks repairs are knowledgeable in confined space entry procedures, and of purging, entry, and cleaning procedures per applicable standards.
☐ Yes ☐ No

2. Safety Precautions -

a) Static electricity precautions regarding grounding of equipment, tank entry personnel clothing and bonding cable requirements for the initial cleaning operation will be properly observed.
☐ Yes ☐ No

b) Vapor reading of ten percent (10%) LFL or less will be verified immediately prior to removing the manway cover or cutting the tank access opening, and performed throughout the opening process to ensure a safe atmosphere. ☐ Yes ☐ No

c) Type of combustible gas indicator used for monitoring purposes: _____

d) Combustible gas indicator calibrated per manufacturer's specifications. ☐ Yes ☐ No

e) Personnel entering the tank will be equipped at all times with positive pressure air-supplied respirators with full face enclosure, safety harness connected to a safety line held by attendant outside the tank.
☐ Yes ☐ No

f) The interior surface of the tank must be examined by using a light fixture that meets the requirement of NFPA 70 (Class 1, Division 1, Group D). ☐ Yes ☐ No

3. Visual Inspection -

a) Measurements for geometric distortion will be taken every three feet (3') of the interior diameter of the tank. ☐ Yes ☐ No

b) The tank shell wall will be hardness tested using a Barcol hardness tester, GYZJ 935, or other acceptable instrument to determine if the hardness meets manufacturer's specifications, which should verify whether chemical attack has occurred. ☐ Yes ☐ No

4. Opening and Repair Procedures -

a) The access opening will be cold cut in the dome of the tank with the minimum dimensions of 22" by 22". ☐ Yes ☐ No

b) All perimeters of the dome section to be cut will be at least eight inches (8") from the tank's ribs. ☐ Yes ☐ No

c) The access opening will be bevel cut using an air-driven saber saw, utilizing lubricating oil to reduce friction, heat, and possible sparks. ☐ Yes ☐ No

d) After completion of surface preparation, multiple layers of 1.5 ounces per square foot fiberglass mat will be applied to the damaged area, with the initial layer extending at least four inches (4") beyond the perimeter of the damaged area and additional layers two inches (2") beyond the perimeter of the previous applied layer. ☐ Yes ☐ No

e) If a section of the tank is missing, a splash will be cut ½ inch larger on all sides than the section that is missing with the edges and side of the splash that the repair FRP laminates properly sandblasted or ground. ☐ Yes ☐ No

Note: *Sandblasting is preferred because it will expose glass fibers during surface preparation that will provide a mechanical bond for the repair of lining material. Grinding could shear or melt glass fibers and not expose as many glass fibers to provide as strong a bonding surface*

f) Fractures will have holes drilled at each end of the fracture. The drilled holes shall be larger in diameter than the width of the fracture. ☐ Yes ☐ No

g) The removal, surface preparation, attachment and covering, as well as testing of a tank fitting plate assembly will be done per applicable standard requirements. ☐ Yes ☐ No

h) Manway assembly repair or replacement will be accomplished by the use of materials which are FRP compatible and applied in conformance with applicable standards. ☐ Yes ☐ No

i) Manway assembly will be provided with a riser and access cover accessible from grade level. ☐ Yes ☐ No

j) The FRP tank will be lined for compatibility with products other than those that were intended for storage as originally manufactured, with a proper lining material that will be at least 100 to 125 mils

thick. ☐ Yes ☐ No

4. Opening and Repair Procedures (Continued)-

k) A ¼ inch steel striker plate with the minimum dimensions of 8" x 8" will be installed under the gauge and fill openings if the tank will be lined or if the striker plate was not installed previously. ☐ Yes ☐ No

5. Tank Closing -

a) If an opening is cut, the removed section of the end cap and a minimum of six inches (6") of the adjoining tank wall surface will be abrasive blasted. ☐ Yes ☐ No

b) The seams of the entry hole will be sealed by the application of five (5) plies of 1½ ounces per square foot fiberglass chopped strand matting saturated with lining material extending a minimum of four inches (4") beyond the perimeter of the access opening seams. All fiberglass material will be treated with silane, and the final laminate equal to or exceeding the wall thickness of the original tank wall. ☐ Yes ☐ No

c) The access opening seal and accessible areas that were repaired will be tested for tightness prior to covering with backfill and paving by performing an air pressure test at a pressure recommended by the tank manufacturer and applying a soap solution to the seal and accessible repair areas and inspecting it for bubbles. *This test is only allowed when the tank does not contain petroleum product liquid or vapors.* ☐ Yes ☐ No

d) Before the tank excavation is backfilled, the tank will be tightness-tested using a precision test in accordance with NFPA 329. Particular attention will be paid to the access opening seal and accessible areas of repair. ☐ Yes ☐ No

Tank Preparation Procedure for Steel UGST's-

1. Tank Preparation Procedure –

a) Type of combustible gas indicator used for monitoring purposes: _____

Model of combustible gas indicator used for monitoring purposes: _____

_____

b) Combustible gas indicator calibrated per manufacturer's specifications? ☐ Yes ☐ No

c) Tank ventilation provided by which type of air mover? _____

d) Purging, air ventilation, and testing will continue throughout the entire lining process to ensure the vapor concentration does not exceed ten percent (10%) of the LFL. ☐ Yes ☐ No

e) Personnel entering the tank will be equipped at all times with positive pressure air-supplied respirators with full face enclosure, safety harness connected to a safety line held by attendant outside the tank. ☐ Yes ☐ No

f) The interior surface of the tank must be examined by using a light fixture that meets the requirement

of NFPA 70 (Class 1, Division 1, Group D). ☐ Yes ☐ No

1. Tank Preparation Procedure (Continued)–

g) Tank metal thickness determination shall be accomplished by which method?
☐ Destructive ☐ Non-destructive

h) A white metal blast will be completed on the shell surface preparatory to lining. ☐ Yes ☐ No

i) All perforations in the tank shall be plugged with boiler plugs or hydraulic cement prior to abrasive blasting. ☐ Yes ☐ No

j) Boiler plugs and hydraulic cement plugs will be covered with epoxy or polyester and then covered with fiberglass cloth (minimum 1½ ounces per square yard, silane treated) that overlaps all sides of the plug by a minimum of two inches (2"). ☐ Yes ☐ No

2. Application of Lining:

a) A ¼ inch steel reinforcing plate rolled to the contour of the tank and with minimum dimensions of 8" by 8" will be installed under the fill (drop) tube and gauging tube. ☐ Yes ☐ No

b) The blast cleaned surface will be coated within eight (8) hours after blasting and before any visible rusting appears. ☐ Yes ☐ No

c) Manufacturer's instructions will be followed on handling and mixing of resin compounds, and these compounds will be applied to the entire interior surface of the tanks by the manufacturer or his designated distributor. ☐ Yes ☐ No

d) If a heater is used to accelerate the curing process, all other work that might release flammable vapors will be halted and the heating unit will be attended whenever it is in operation.
☐ Yes ☐ No

e) The coating will be cured thoroughly to manufacturer's specifications and checked for air pockets and pin holes using a holiday detector. Any defects found will be repaired to manufacturer's specifications. ☐ Yes ☐ No

f) The coating thickness will be checked with a thickness gauge and tested for hardness using a hardness tester to ensure compliance with the manufacturer's specifications. ☐ Yes ☐ No

g) Manway assembly will consist of steel construction and be properly installed per manufacturer's instruction. ☐ Yes ☐ No

h) Manway assembly is to be repaired per manufacturer's instructions. ☐ Yes ☐ No

i) Manway assembly is to be provided with housing and cover accessible from grade level.
☐ Yes ☐ No

3. Tank Closing -

a) A ¼ inch thick steel cover plate rolled to the contour of the tank will be made to overlap the hole by at least two inches (2") on each side. ☐ Yes ☐ No

b) The cover plate will be sandblasted to white metal on both sides, and the entire inside surface will be coated with coating material to act as a gasket. ☐ Yes ☐ No

c) Before the coating on the tank cures, the cover will be fastened to the tank by ½ inch bolts (minimum diameter) placed through the holes from inside the tank, held in place by spring clips and then fastened with locking washers and nuts. ☐ Yes ☐ No

If *"no",* please indicate if self-tapping bolts will be used to fasten the cover to the tank.
☐ Yes ☐ No

d) After the cover has been bolted to the tank, the cover plate and surrounding tank surface will be properly sandblasted, coated with coating material, and allowed to cure before the tank excavation is back-filled. ☐ Yes ☐ No

e) The cover plate seal will be tested for tightness prior to covering with backfill and paving by performing an air pressure test of the tank at five (5) psig and applying a soap solution to the cover and inspecting it for bubbles. This test is only allowed when the tank does not contain petroleum product liquid or vapors. ☐ Yes ☐ No

f) Before the tank excavation is backfilled, the tank will be tightness-tested using a precision test in accordance with NFPA 329. Particular attention will be paid to the cover plate and all exposed fittings. ☐ Yes ☐ No

I, the undersigned, do hereby agree that this installation shall comply with all applicable requirements of the "Standards of Safety" promulgated in 815 KAR 10:060 and all other applicable standards as required. All answers in this application are true and accurate to the best of my knowledge.

_____ _____

Contractor Signature Date

Fee Schedule

A charge of $100.00 for the first tank and $50.00 for each additional tank is required for this specialized review. **The required fee must accompany your application for permit.** Your check or money order should be made payable to the *"Kentucky State Treasurer".* The name and location of the project must be indicated on the check or money order.

Note: Site plan, specifications and check or money order shall accompany this document for approval. Please return completed application to the address listed below:

Office of Housing, Buildings and Construction
Hazardous Materials Section
101 Sea Hero Road Suite 100
Frankfort, Kentucky 40601-5405

Approval by the State Fire Marshal

LOCATION NAME

IF THE NAME HAS CHANGED, WHAT WAS IT PREVIOUSLY CALLED

STREET ADDRESS

CITY

COUNTY

PERMIT NUMBER

This storage tank system was tested on _____ with satisfactory results.

Pursuant to KRS 227.300 and 815 KAR 10:060 the above listed installation is found to have substantially complied with the Kentucky "*Standards of Safety"*.

Hazardous Materials Field Inspector **Badge #** **Date**

Site Plan